

Results of the 2001 Survey of the Reintroduced Sea Otter Population in Washington State

Prepared by

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The survey was conducted from 9-13 July, and included the entire inshore area from Pt. Grenville (including Destruction Island) to Pillar Point. Biologists of the Biological Resources Division of the United States Geological Survey, the Washington Department of Fish and Wildlife, Olympic National Park, Olympic Coast National Marine Sanctuary, and the Seattle Aquarium conducted the survey cooperatively. Counting conditions this year ranged from good to excellent. We wish to thank the U. S. Fish and Wildlife Service whose funding support made the survey possible this year.

Methods

Most of the range was surveyed from a fixed-winged aircraft, but ground counts were made at Cape Johnson, Norwegian Memorial, Yellow Banks, Sand Point, Cape Alava, Duk Point (Seafield Creek), and Father and Son. Two surveys are conducted each day over a period of 3 days weather permitting. Thus, when conditions are favorable, six surveys of the entire range are completed. However, this year inclement weather restricted the number of flights to four during the 3 days that ground counts were made (10, 11, and 12 July), and one each on 9 and 13 July. The offshore leg, added in 1999, was included again this year.

The survey total is calculated by summing the highest daily total for the southern (Pt Grenville to La Push) and northern (La Push to Pillar Point) segments of the sea otter range (11 July south, and 12 July north). This assumes that there is little or no movement between the two segments during the survey period. Examination of survey data from years past and this year and documented movements of instrumented sea otters by USGS researchers in Washington support this assumption. Large groups (>20) observed from the air were generally counted and photographed. The developed slides were recounted (3 times) and these counts were used when image quality was good and ground counts were not available or were less than the slide count.

Results

The highest count for the survey was 555 sea otters, an increase of 10% from 2000 (*Table 1*). The finite rate of increase for this population since 1989 is 8.8% (*Figure 1*). This year 45 pups were observed during the count. Although the total number is still below the 1999 count, we are encouraged by the pup count. In 2000 few, if any, pups were observed during most of the survey days. It's not unusual for pups to go undetected from the aircraft because they are difficult to distinguish from adults from the air; however, experienced ground counters can easily make the distinction. This year pups were seen at all ground stations with the exception of Cape Johnson (the team apparently was only recording small pups). For comparison, in 2000 no pups were seen from the air and the best ground count ratio was 4:100. In 2001, the overall pup to adult ratio was 9:100, and in ground count areas the ratio was 13:100 well above 2000, but still somewhat below the 1999 value of 17:100. In areas where the observers recorded all pups the ratio was 16:100, closer to the 1999 value.

Most of the increase this year was north of La Push, up 21% from 2000. The area south of La Push was down by 6%. No one location in the southern portion of the range stood out in terms of the decline. The extreme south end of the established range was down about 10%.

The distribution of sea otters in Washington has not changed significantly in 2001 when compared to 2000, with one notable exception (*Figure 2*). For the first time we saw significant numbers of sea otters near Diamond Rock located about 4 kilometers south of the Perkins Reef (Rock 443) group and 1.5 kilometers north of the Hoh River mouth. The Diamond Rock raft contained pups suggesting a southerly shift of adult females along the mainland.

The Sand Point to Father and Son area has long been a high-density area and includes one of the earliest known areas (Cape Alava) occupied after the 1969/70 reintroductions. The 2000 count in this area was well below the 1999 value, but this year's total is actually 10% above the 1999 number. The distribution of sea otters between the north and south segments has remained relatively unchanged. In 2000, the southern segment (La Push south) comprised 40% of the total, in 2001 about 34%. In the northern section (La Push north) 60% and 66% of the total occurred in 2000 and 2001, respectively. These differences are not significant. No sea otters were observed east of Tatoosh Island this year or south of Destruction Island.

Discussion

Survey results this year are encouraging, especially the number of pups observed. However, the expected count was still below the expected value based on the regression model through 2001. The predicted total based on the regression model is 635 (*Figure 1*), but the actual observed number (555) is 80 animals less than the model prediction. As the slope of the regression model suggests, it appears that the overall rate of increase is actually decreasing for this population from what it was prior to 1989 although the overall trend is still positive (*Figure 1*).

Our survey area did not include Puget Sound, yet we are aware of at least two sea otters using habitat near Tacoma and Olympia. One, a sub-adult male, was observed near Nisqually

National Wildlife Refuge in June, and another, a sub-adult female, was reported in July and was possibly seen as early as June. Most likely both were still in the Puget Sound at the time of the survey, but we have no way of knowing so they have not been included in the survey total.

The male was actually captured when it became entrapped in a municipal water supply facility. It was held for a time, tagged, and released. No subsequent reports of this animal have been received, but the female was still in the area as of late October. What is interesting about both of these sightings is that historical records from the fur trade period and archeological excavations from Washington suggest that there were few if any sea otters east of the San Juan Islands. It's certainly possible that there have always been wandering individuals entering the "Sound", but it's unlikely that large established groups went unnoticed by fur trade hunters or Native Americans living and hunting in the area. We plan to closely monitor the fate of these wandering individuals.

Table 1. Results of the 2000 and 2001 sea otter surveys in Washington State.

LOCATION	2001			2000		
	INDEPENDEN TS	PUPS	TOTAL	INDEPENDENT S	PUPS	TOTAL
Willoughby Rock	0	0	0	1	0	1
Destruction Island ¹	116	0	116	129	0	129
Diamond Rock	24	1	25	0	0	0
Perkins Reef (Rock 443) ¹	29	1	30	61	0	61
Goodman Creek	1	0	1	0	0	0
Toleak/Strawberry Point	5	0	5	1	0	1
Giants Graveyard/Teahwhit Head	9	1	10	8	0	8
James Island to Hole-In-The-Wall South of Cape Johnson/Chilean Memorial	0	0	0	1	0	1
	6	1	7	0	0	0
Cape Johnson/Bluff Point ²	59	0	59	95	0	95
Carrol Island/ Sea Lion Rock	0	0	0	1	0	1
Sandy Island	1	0	1	0	0	0
Jagged Island	0	0	0	16	0	16
Cedar Creek/Norwegian Memorial ²	28	5	33	42	0	42
Kayostla Beach	1	0	1	0	0	0
Yellow Banks Area ²	26	2	28	34	0	34
Sand Point ²	44	7	51	15	0	15
Inshore White Rock /Wedding Rocks	10	1	11	0	0	0
Southeast of Ozette Island ²	2	0	2	2	0	2
Ozette/Cape Alava/Bodelteh Islands ²	53	10	63	48	0	48
West End Of Bodelteh Islands	0	0	0	2	0	2
Duk Point ²	49	6	55	35	0	35
Father And Son ²	42	10	52	1	0	1
Point Of Arches	0	0	0	4	0	4
Anderson Point	4	0	4	5	0	5
Archawat Creek	1	0	1	0	0	0
Tatoosh Island	0	0	0	2	0	2
Pillar Point	0	0	0	1	0	1
TOTALS	510	45	555	504	0	504

¹ Includes count from aerial photograph.

² Counted from land-based stations.

Figure 1 . Growth of the Washington sea otter population from 1989-2001

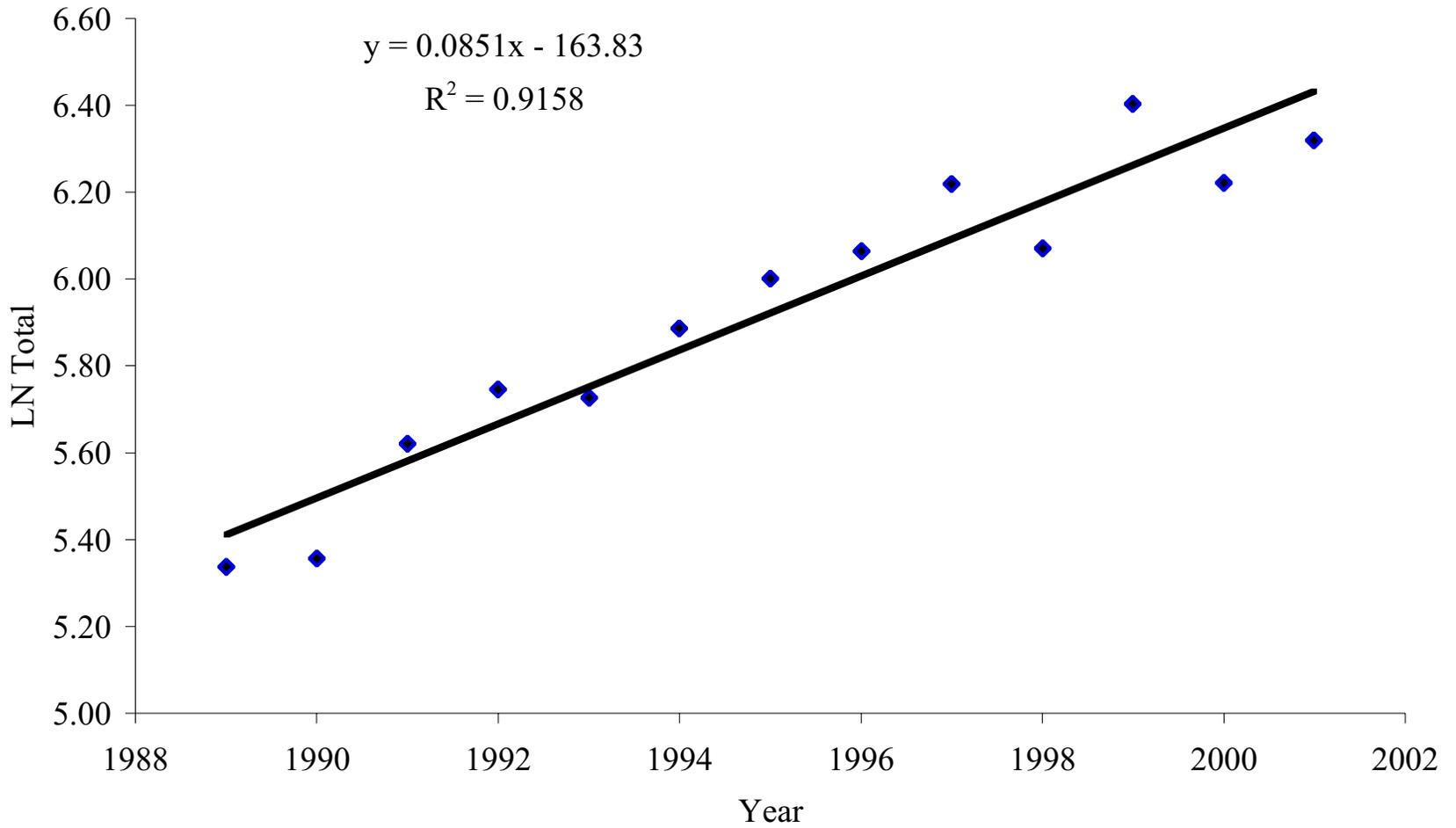


Figure 2. A comparison of the distribution of sea otters in Washington State in 2001 and 2000.

